Computing Curriculum Rationale

INTENT	
How is computing aligned to the national curriculum?	The computing curriculum at Meadow Vale begins the EYFS and then follows the National Curriculum through elements of: the Knowsley City Learning Computing Scheme of Work, Discovery Education and Barefoot Computing. It has been designed to enable children to become computational thinkers when programming and creative users of information technology. The curriculum is taught through the three key areas of computing: digital literacy, computer science and information technology.
What are the end points for the curriculum and what knowledge and skills will children have when they leave us?	By year 6 pupils will be more independent in their use of technology and will conduct themselves safely and responsibly. Children will be able to use the knowledge and skills acquired throughout their time at Meadow Vale to independently produce digital content and create programs in the three areas of computer science, information and technology and digital literacy.
How is the curriculum sequenced from EYFS to year 6?	As the National Curriculum for computing is not broken down further than just key stages, careful consideration has been given to how the different elements of the subject should be sequenced. In the autumn term, each year group begins the year with a unit of work on online safety, ensuring that children are able to work safely and responsibly in computing lessons underpins all aspects of their learning. Each unit of work will begin by exploring pupil's prior knowledge, either that learnt in previous year groups or that already acquired at home. In EYFS, children are introduced to and explore different technology.
Local Context – is there any local context that plays a role in our curriculum design? LocConte	At Meadow Vale, children have access to either a class set of iPads or laptops enabling computing to be taught in classrooms and allowing the teachers to choose the most appropriate hardware to support the children's learning. Throughout their journey at Meadow Vale, children will be exposed to a range of current hardware and software such as netbooks, iPads and laptops, which are used for both computing lessons and across other areas of the curriculum. We also have bespoke devices for SEND pupils to support them in class with their learning. For a proportion of our lower attaining pupils and pupils with SEND, carefully structured support and purposeful guidance is provided, where necessary, to increase their confidence and independence with using devices.

IMPLEMENTATION

Pedagogical Approaches – what teaching approaches are taken to secure knowledge and skills?	The knowledge and skills required in the computing curriculum are taught through a progressive and structured approach. The teacher introduces the learning, explains the purpose of it, models how to implement the knowledge acquired, provides shared experiences in order to scaffold the learning for individual needs and provides immediate feedback. This is followed by the children putting into practice what they have learned by independently or collaboratively completing tasks.
Teachers' expert knowledge – how do we ensure quality first teaching? What training, CPD, resources are available to support?	We have provided teachers with training to deepen their understanding and knowledge of computing so that explanations are clear, accurate and responsive and children's misconceptions are anticipated and addressed as they arise. Teachers follow the Knowsley Computing Scheme of Work to deliver content for digital literacy and they access both Discovery Education and Barefoot Computing to deliver content for computer science. These schemes provide: a large bank of resources to support units, access to online tutorials to further extend and support teacher knowledge and links to both the National Curriculum and the nationally recognised Progression Framework from CAS (Computing at School). Teachers are offered support and subject specific professional development is in place, in the form of training, to ensure that teachers are equipped to effectively deliver new or changing material.
Knowing and remembering more – what approaches do we use to ensure knowledge is retained? E.g. knowledge organisers, retrieval practice	The first lesson for each unit of work is used to review the ideas mastered in previous units or to find out what the children already know about the area being taught. Opportunities for retrieval practice are included in computing lessons to ensure knowledge is transferred into long-term memory. Retrieval activities may require children to remember learning from the previous lesson, previous topic or even previous year.
Teacher assessment – what does assessment look like?	Formative assessment is used throughout the computing curriculum. This is achieved through informal observations, quizzes, self and peer assessments, using success criteria to assess a final project. The teacher plans opportunities in the lesson to check that pupils understand, are able to problem solve, can predict and can explain their learning using the key vocabulary.
How do we know that the end points have been achieved? What does success look like?	In order to evaluate the impact of the computing curriculum both on learners individually and in the school as a whole the computing subject leaders will: monitor and analyse subject assessment information, carry out pupil voice and teacher audits and look carefully at planning, children's books and learning environments. All of the above will help to inform and further develop the computing curriculum at Meadow Vale.

IMPACT	
How does our assessment approach inform us of how well children are doing?	The approach to assessment is less formal than in core subjects. In computing, there is ongoing teacher assessment to ensure that the children are keeping up with the pace of the curriculum and achieving the school's outcomes. After a unit, children will carry out self/peer assessments and/or quizzes on the work they have produced against the set criteria.
Pupils work – what evidence is used to demonstrate children's learning?	Pupils' work is saved in a variety of ways depending on the activity. Children have access to shared areas on the school network to be able to save their work. They also save their work on platforms such as: Book Creator and Discovery Education. The work is accessed by scanning QR codes or entering pupil login details. These not only provides the teacher with evidence for assessment, but also gives the teacher the opportunity to use children's work to demonstrate, model or modify and develop understanding. Work is monitored by the subject leader to ensure there is sequence, progression and greater independence by higher year groups.
What feedback do pupils give and how can this be used to make changes to the curriculum?	The class teacher and, where practicable, computing subject leader have discussions with pupils about their learning as it progresses. This forms part of the monitoring process. Children's work and their quizzes guide these discussions, to ensure the teacher knows to what depth the new knowledge and skills have been learnt. Talking to pupils is key to the continual refinement and development of the computing curriculum.